

WHAT IS CLAIMED IS:

1. A composition suitable for capturing unwanted molecules, the composition comprising functionally-available cyclodextrin, a cyclodextrin-incompatible surfactant, and a cyclodextrin-compatible surfactant wherein the concentration of functionally-available cyclodextrin is at least about 0.001%.
2. A composition according to Claim 1 wherein the concentration of functionally-available cyclodextrin is at least about 0.01%.
3. A composition according to Claim 1 wherein the level of functionally-available cyclodextrin is at least about 10% of the level of functionally-available cyclodextrin which would be present in an equivalent composition containing none of the cyclodextrin-incompatible material.
4. A composition according to Claim 3 wherein the level of functionally-available cyclodextrin is at least about 30% of the level of functionally-available cyclodextrin which would be present in an equivalent composition containing none of the cyclodextrin-incompatible material.
5. A composition according to Claim 4 wherein the level of functionally-available cyclodextrin is at least about 50% of the level of functionally-available cyclodextrin which would be present in an equivalent composition containing none of the cyclodextrin-incompatible material.
6. A composition according to Claim 1 wherein at least about 10% of the total cyclodextrin present in said composition is in functionally-available form.
7. A composition according to Claim 6 wherein at least about 30% of the total cyclodextrin present in said composition is in functionally-available form.
8. A composition according to Claim 7 wherein at least about 50% of the total cyclodextrin present in said composition is in functionally-available form.

9. A composition according to Claim 1 wherein said composition comprises from about 0.01% to about 5%, by weight, of functionally-available cyclodextrin.

10. A composition according to Claim 9 wherein said composition comprises from about 0.1% to about 4%, by weight, of functionally-available cyclodextrin.

11. A composition according to Claim 1 wherein said composition comprises from about 5% to about 40%, by weight, of functionally-available cyclodextrin.

12. A composition according to Claim 11 wherein said composition comprises from about 7% to about 15%, by weight, of functionally-available cyclodextrin.

13. A composition according to Claim 1 wherein said cyclodextrin-incompatible surfactant has a complexation constant with cyclodextrin of greater than about 5,000 M⁻¹ and said cyclodextrin-compatible surfactant has a complexation constant with cyclodextrin of no greater than about 5,000 M⁻¹.

14. A composition according to Claim 13 wherein said cyclodextrin-incompatible surfactant has a complexation constant with cyclodextrin of greater than about 8,000 M⁻¹ and said cyclodextrin-compatible surfactant has a complexation constant with cyclodextrin of no greater than about 3,000 M⁻¹.

15. A composition according to Claim 1 wherein said cyclodextrin-incompatible surfactant has a ClogP value of at least about 3.

16. A composition according to Claim 15 wherein said cyclodextrin-incompatible surfactant has a ClogP value of at least about 3.5.

17. A composition according to Claim 1 wherein said composition comprises molecular aggregates comprising said cyclodextrin-compatible surfactant and said cyclodextrin-incompatible surfactant.

18. A composition according to Claim 1 wherein said composition additionally comprises a hydrotrope which is an organic compound having a complexation constant with cyclodextrin of no greater than about 1,000 M⁻¹.

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19. A composition according to Claim 1 wherein said cyclodextrin-compatible surfactant has a critical micelle concentration (CMC) not more than about 10^{-2} mol/l.
 20. A composition according to Claim 19 wherein said cyclodextrin-compatible surfactant has a critical micelle concentration (CMC) not more than about 10^{-3} mol/l.
 21. A composition according to Claim 20 wherein said cyclodextrin-compatible surfactant has a critical micelle concentration (CMC) not more than about 10^{-4} mol/l.
 22. A composition according to Claim 1 wherein a mixture of all surfactants present in said composition has a CMC of not more than about 10^{-2} mol/l.
 23. A composition according to Claim 22 wherein said mixture of all surfactants present in said composition has a CMC of not more than about 10^{-3} mol/l.
 24. A composition according to Claim 23 wherein said mixture of all surfactants present in said composition has a CMC of not more than about 10^{-4} mol/l.
 25. A composition according to Claim 1 wherein said cyclodextrin-incompatible surfactant has a CMC of greater than about 10^{-2} mol/l.
 26. A composition according to Claim 1 wherein said composition comprises at least one surfactant which has CMC greater than 10^{-2} mol/l and wherein a mixture of all surfactants present in the compositions has CMC not more than about 10^{-2} mol/l.
 27. A composition according to Claim 1 wherein said cyclodextrin-compatible surfactant has a complexation constant with cyclodextrin of no greater than about 5,000 M⁻¹.
 28. A composition according to Claim 27 wherein said cyclodextrin-compatible surfactant has a complexation constant with cyclodextrin of no greater than about 3,000 M⁻¹.
 29. A composition according to Claim 1 in which the cyclodextrin-compatible surfactant is a nonionic surfactant.
 30. A composition according to Claim 29 wherein said nonionic surfactant has a molecular weight of at least about 250.

31. A composition according to Claim 17 wherein said molecular aggregates are micelles or vesicles comprising said cyclodextrin-compatible surfactant and said cyclodextrin-incompatible surfactant.

32. A composition according to Claim 17 wherein all surfactants in said composition form part of said molecular aggregates.

33. A composition according to Claim 1 wherein said cyclodextrin-compatible surfactant is selected from the group consisting of block copolymer surfactant, siloxane surfactant, anionic surfactant, castor oil surfactant, sorbitan ester surfactant, polyethoxylated fatty alcohol surfactant, polypropoxylated fatty alcohol surfactant, glycerol mono-fatty acid ester surfactant, polyethylene glycol fatty acid ester surfactant, polypropylene glycol fatty acid ester surfactant, fluorocarbon surfactant, and mixtures thereof.

34. A composition according to Claim 33 wherein said cyclodextrin-compatible surfactant is selected from the group consisting of castor oil surfactant, sorbitan ester surfactant, polyethoxylated fatty alcohol surfactant, polypropoxylated fatty alcohol surfactant, glycerol mono-fatty acid ester surfactant, polyethylene glycol fatty acid ester surfactant, polypropylene glycol fatty acid ester surfactant, fluorocarbon surfactant, and mixtures thereof; wherein the cyclodextrin-compatible surfactant is preferably a castor oil surfactant.

35. A composition according to Claim 1 wherein said composition additionally comprises a polymer wherein a mixture of polymer and all surfactants present in said composition has a CMC of not more than about 10^{-2} mol/l.

36. A composition according to Claim 35 wherein said mixture of polymer and all surfactants present in said composition has a CMC of not more than about 10^{-3} mol/l.

37. A composition according to Claim 36 wherein said mixture of polymer and all surfactants present in said composition has a CMC of not more than about 10^{-4} mol/l.

38. A composition according to Claim 35 wherein said composition comprises at least one ionic surfactant and in which said polymer is nonionic or has a charge opposite to that of said surfactant.

39. A composition according to Claim 38 wherein said ionic surfactant is a cyclodextrin-compatible surfactant.

40. A composition according to Claim 1 wherein said cyclodextrin-compatible surfactant is present at a concentration above its CMC.

41. A composition according to Claim 1 wherein said composition is a composition for capturing malodorous molecules.

42. A composition according to Claim 41 wherein said composition is a cleaning product.

43. A composition according to Claim 42 wherein said cleaning product is a liquid cleaning product, a fabric refresher, a hair care product, a personal washing product, a deodorant, or a composition for impregnation into a wipe

44. A composition according to Claim 43 wherein said cleaning product is a fabric refresher product.

45. A process of manufacturing a composition suitable for capturing unwanted molecules comprising the steps of:

- (a) providing cyclodextrin, a cyclodextrin-compatible surfactant, and a cyclodextrin-incompatible surfactant;
- (b) combining said cyclodextrin-compatible surfactant and said cyclodextrin-incompatible surfactant to form a first mixture; and
- (c) subsequently combining said cyclodextrin with said first mixture to form said composition suitable for capturing unwanted molecules.

46. A process according to Claim 45 wherein said process comprises combining said cyclodextrin-compatible surfactant and said cyclodextrin-incompatible surfactant with water to form a first aqueous mixture and subsequently adding cyclodextrin to said first aqueous mixture to form said composition suitable for capturing unwanted molecules.

47. A process according to Claim 45 wherein said process comprises combining said cyclodextrin-compatible surfactant and said cyclodextrin-incompatible surfactant to form a first mixture, combining said cyclodextrin with water to form a second aqueous mixture and

combining the first mixture and the second aqueous mixture to form said composition suitable for capturing unwanted molecules.

48. A process according to Claim 45 wherein said first mixture comprises said cyclodextrin-incompatible surfactant solubilised in micelles or vesicles comprising said cyclodextrin-compatible surfactant as molecular aggregates.

49. A method of removing unwanted molecules from a surface comprising applying to the surface a composition according to Claim 1 and allowing the composition to dry.

50. A method according to Claim 49 wherein said surface is a fabric.

51. A cleaning method comprising applying to the article or articles to be cleaned a composition according to Claim 1.

52. A method according to Claim 51 wherein said articles to be cleaned are garments, dishware, or hard surfaces.